

WHAT IS CLAIMED IS:

1. A specific binding protein which specifically binds to native canine free or B cell-bound IgE, and which does not bind to IgE when the IgE is bound to a receptor on a mast cell.

2. The specific binding protein of claim 1 wherein the B cell-bound IgE is IgE expressed on the surface of a canine B cell.

3. A method for treatment or prophylaxis for canine allergy, said method comprising:  
providing a specific binding protein of claim 1;  
and,  
administering the provided binding protein to a dog.

4. The method of claim 3 further comprising a step of mixing the provided binding protein with a diluent prior to the administering step, and wherein the administering step comprises administering the mixture of the binding protein and the diluent.

5. The method of claim 3 further comprising a step of administering a booster dose of the provided binding protein, following the administering step.

6. A specific binding protein which specifically binds to an isolated and purified peptide comprising a leucine

*mk*  
*E2*  
*uf*  
positioned two peptide bonds away from a tyrosine-arginine pair.

*a*  
*a*  
*a*  
*mk*  
*E3*  
7. The specific binding protein of claim 6 which  
5 specifically binds to peptide comprising the form:  
leucine-blank-blank-tyrosine-arginine, <sup>(SEQ ID NO:1)</sup> tyrosine-arginine-  
blank-blank-leucine, <sup>(SEQ ID NO:2)</sup> or, leucine-blank-blank-tyrosine-  
arginine-blank-blank-leucine, <sup>(SEQ ID NO:3)</sup> where blank is any amino acid.

*mk*  
*E4*  
10 8. The specific binding protein of claim 7 wherein at  
least one blank is an amino acid with an aromatic ring.

15 9. A specific binding protein of claim 6 which is an  
antibody.

10. The specific binding protein of claim 9 which is a  
monoclonal antibody.

20 11. An antibody of claim 9 which is raised to an  
isolated and purified peptide comprising a leucine positioned  
two peptide bonds away from a tyrosine-arginine pair, and  
wherein the peptide consists of from 5 to 71 amino acids.

25 12. A method for treatment or prophylaxis for canine  
allergy, said method comprising:  
providing a specific binding protein in accordance  
with claim 8; and,  
administering the provided binding protein to a dog.

13. The method of claim 12 further comprising a step of mixing the provided binding protein with a diluent prior to the administering step, and wherein the administering step comprises administering the mixture of the binding protein and the diluent.

14. The method of claim 12 further comprising a step of administering a booster dose of the provided binding protein, following the administering step.

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15. An antibody which is raised to an isolated and purified peptide comprising an amino acid sequence which comprises Thr-Leu-Leu-Glu-Tyr-Arg-Met, or a conservative variant thereof.

15

16. The antibody of claim 15 that binds to a defined epitope.

20

17. A recombinant binding molecule which specifically binds to the defined epitope bound by the antibody of claim 16.

25

18. A method for treatment or prophylaxis for canine allergy, said method comprising:  
providing an antibody in accordance with claim 15;  
and,  
administering the provided binding protein to a dog.

30

19. The method of claim 18 further comprising a step of mixing the provided antibody with a diluent prior to the

administering step, and wherein the administering step comprises administering the mixture of the antibody and the diluent.

5           20. The method of claim 18 further comprising a step of administering a booster dose of the provided antibody, following the administering step.

10           21. An antibody which is raised to an isolated and purified peptide comprising an amino acid sequence which comprises ~~Gly-Met-Asn-Leu-Thr-Tyr-Arg-Glu-Ser-Lys~~, or a conservative variant thereof.

15           22. The antibody of claim 21 that binds to a defined epitope.

20           23. A recombinant binding molecule which specifically binds to the defined epitope bound by the antibody of claim 22.

25           24. A method for treatment or prophylaxis for canine allergy, said method comprising:  
              providing an antibody in accordance with claim 21;  
and,  
              administering the provided binding protein to a dog.

              25. The method of claim 24 further comprising a step of mixing the provided antibody with a diluent prior to the administering step, and wherein the administering step

comprises administering the mixture of the antibody and the diluent.

26. The method of claim 24 further comprising a step of  
5 administering a booster dose of the provided antibody,  
following the administering step.

27. A specific binding protein which is raised to a  
multiply antigenic peptide comprising multiple copies of an  
10 isolated and purified peptide which comprises a leucine  
positioned two peptide bonds away from a tyrosine-arginine  
pair.

28. The specific binding protein of claim 27 which is  
15 raised to a multiply antigenic peptide which comprises  
multiple copies of the isolated and purified peptide  
comprising a leucine positioned two peptide bonds away from a  
tyrosine-arginine pair, and wherein the peptide consists of  
from 5 to 71 amino acids.

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29. The specific binding protein of claim 27 that  
specifically binds to a defined epitope.

30. A recombinant binding molecule which specifically  
25 binds to the defined epitope bound by the binding protein of  
claim 29.

31. A method for treatment or prophylaxis for canine  
allergy, said method comprising:

providing a specific binding protein of claim 27;  
and,  
administering the provided binding protein to a dog.

5        32. The method of claim 31 further comprising a step of  
mixing the provided binding protein with a diluent prior to  
the administering step, and wherein the administering step  
comprises administering the mixture of the binding protein and  
the diluent.

10        33. The method of claim 31 further comprising a step of  
administering a booster dose of the provided binding protein,  
following the administering step.

15        34. A specific binding protein which is raised to a  
recombinant plant virus particle comprising at least one copy  
of an isolated and purified peptide comprising a leucine  
positioned two peptide bonds away from a tyrosine-arginine  
pair.

20        35. The specific binding protein of claim 34 which is  
raised to the recombinant plant virus particle, wherein the  
particle comprises at least one copy of the isolated and  
purified peptide comprising a leucine positioned two peptide  
25 bonds away from a tyrosine-arginine pair, and wherein the  
peptide consists of from 5 to 71 amino acids.

30        36. The specific binding protein of claim 34 that  
specifically binds to a defined epitope.

37. A recombinant binding molecule which specifically binds to the defined epitope bound by the binding protein of claim 36.

5 38. A method for treatment or prophylaxis for canine allergy, said method comprising:

providing a specific binding protein in accordance with claim 34; and,

administering the provided binding protein to a dog.

10 39. The method of claim 38 further comprising a step of mixing the provided binding protein with a diluent prior to the administering step, and wherein the administering step comprises administering the mixture of the binding protein and  
15 the diluent.

20 40. The method of claim 39 further comprising a step of administering a booster dose of the provided binding protein, following the administering step.

41. A monoclonal antibody which is 8H.8.

25 42. The monoclonal antibody of claim 41 that specifically binds to a defined epitope.

43. A recombinant binding molecule which specifically binds to the defined epitope bound by the antibody of claim 41.

44. A method for treatment or prophylaxis for canine allergy, said method comprising:  
providing the monoclonal antibody of claim 41 and,  
administering the provided monoclonal antibody to a  
5 dog.

45. The method of claim 44 further comprising a step of mixing the provided monoclonal antibody with a diluent prior to the administering step, and wherein the administering step  
10 comprises administering the mixture of the monoclonal antibody and the diluent.

46. The method of claim 44 further comprising a step of administering a booster dose of the provided monoclonal  
15 antibody, following the administering step.

47. A specific binding protein which specifically binds to an isolated and purified peptide comprising cysteine-blank-  
proline-histidine-blank-proline-blank-blank-cysteine, where  
20 blank is any amino acid. (SEQ ID NO: 9)

48. The specific binding protein of claim 47 which is an antibody.

49. The specific binding protein of claim 48 which is a  
25 monoclonal antibody.

50. An antibody of claim 48 which is raised to an isolated and purified peptide comprising cysteine-blank-



proline-histidine-blank-proline-blank-blank-cysteine, where  
blank is any amino acid.

51. A method for treatment or prophylaxis for canine  
allergy, said method comprising:  
providing a specific binding protein in accordance  
with claim 47; and,  
administering the provided binding protein to a dog.

52. The method of claim 51 further comprising a step of  
mixing the provided binding protein with a diluent prior to  
the administering step, and wherein the administering step  
comprises administering the mixture of the binding protein and  
the diluent.

53. The method of claim 51 further comprising a step of  
administering a booster dose of the provided binding protein,  
following the administering step.

54. An antibody which is raised to an isolated and  
purified peptide comprising an amino acid sequence which  
comprises ~~Cys-Pro-Asn-Pro-His-Ile-Pro-Met-Cys~~, or a  
conservative variant thereof.

55. The antibody of claim 54 wherein the amino acid  
sequence comprises ~~Ser-Val-Thr-Leu-Cys-Pro-Asn-Pro-His-~~  
~~Ile-Pro-Met-Cys-Gly-Gly-Gly~~.

56. The antibody of claim 54 that binds to a defined  
epitope.

57. A recombinant binding molecule which specifically binds to the defined epitope bound by the antibody of claim 56.

58. A method for treatment or prophylaxis for canine allergy, said method comprising:

providing an antibody in accordance with claim 54;

and,

administering the provided binding protein to a dog.

59. The method of claim 58 further comprising a step of mixing the provided antibody with a diluent prior to the administering step, and wherein the administering step comprises administering the mixture of the antibody and the diluent.

60. The method of claim 58 further comprising a step of administering a booster dose of the provided antibody, following the administering step.

61. A specific binding protein which specifically binds to an isolated and purified peptide comprising cysteine-blank-blank-proline-histidine-blank-blank-blank-cysteine, where blank is any amino acid.

(SEQ ID NO: 6)

62. The specific binding protein of claim 61 which is an antibody.

63. The specific binding protein of claim 62 which is a monoclonal antibody.

64. An antibody of claim 62 which is raised to an isolated and purified peptide comprising cysteine-blank-blank-proline-histidine-blank-blank-blank-cysteine, where blank is any amino acid. (SEE ID NO: 6)

65. A method for treatment or prophylaxis for canine allergy, said method comprising:  
providing a specific binding protein in accordance with claim 61; and,  
administering the provided binding protein to a dog.

66. The method of claim 65 further comprising a step of mixing the provided binding protein with a diluent prior to the administering step, and wherein the administering step comprises administering the mixture of the binding protein and the diluent.

67. The method of claim 65 further comprising a step of administering a booster dose of the provided binding protein, following the administering step.

68. An antibody which is raised to an isolated and purified peptide comprising an amino acid sequence which comprises Cys-Pro-Asn-Pro-His-Ile-Pro-Met-Cys or a conservative variant thereof. (SEE ID NO: 16)

a *Sub C5* 69. The antibody of claim 68 wherein the amino acid sequence comprises Ser-Val-Thr-Leu-Cys-Pro-Asn-Pro-His-Ile-Pro-Met-Cys-Gly-Gly-Gly *(SER ID NO. 7)*

5 70. The antibody of claim 68 that binds to a defined epitope.

10 71. A recombinant binding molecule which specifically binds to the defined epitope bound by the antibody of claim 70.

72. A method for treatment or prophylaxis for canine allergy, said method comprising:  
providing an antibody in accordance with claim 68;  
15 and,  
administering the provided binding protein to a dog.

73. The method of claim 72 further comprising a step of mixing the provided antibody with a diluent prior to the  
20 administering step, and wherein the administering step comprises administering the mixture of the antibody and the diluent.

74. The method of claim 72 further comprising a step of  
25 administering a booster dose of the provided antibody, following the administering step.

75. An antibody which is raised to an isolated and purified peptide comprising an amino acid sequence which

a comprises Cys-Pro-Asn-Pro-His-Asn-Pro-Tyr-Cys<sup>A</sup> or a conservative variant thereof.

a 5 76. The antibody of claim 75 wherein the amino acid sequence comprises Ser-Ala-Cys-Pro-Asn-Pro-His-Asn-Pro-Tyr-Cys-Gly-Gly-Gly<sup>A</sup>. (SEE ID NO: 8)

77. The antibody of claim 75 that binds to a defined epitope.

10 78. A recombinant binding molecule which specifically binds to the defined epitope bound by the antibody of claim 77.

15 79. A method for treatment or prophylaxis for canine allergy, said method comprising:

B providing an antibody in accordance with claim 75<sup>75</sup> and, administering the provided binding protein to a dog.

20 80. The method of claim 79 further comprising a step of mixing the provided antibody with a diluent prior to the administering step, and wherein the administering step comprises administering the mixture of the antibody and the 25 diluent.

30 81. The method of claim 79 further comprising a step of administering a booster dose of the provided antibody, following the administering step.

82. A monoclonal antibody which is 15A.2.

83. The monoclonal antibody of claim 82 that specifically binds to a defined epitope.

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84. A recombinant binding molecule which specifically binds to the defined epitope bound by the antibody of claim 83.

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85. A method for treatment or prophylaxis for canine allergy, said method comprising:

providing the monoclonal antibody of claim 82 and,  
administering the provided monoclonal antibody to a

dog.

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86. The method of claim 85 further comprising a step of mixing the provided monoclonal antibody with a diluent prior to the administering step, and wherein the administering step comprises administering the mixture of the monoclonal antibody and the diluent.

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87. The method of claim 85 further comprising a step of administering a booster dose of the provided monoclonal antibody, following the administering step.

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*Add C<sub>6</sub>*